

Appl. No. : 10/600,145
Filed : June 19, 2003

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions and listings of claims in the application. Applicants have amended Claims 7, 14 and 23 in the following, in which added text is underlined and deleted text is stricken through.

1. **(Previously Presented)** An expression vector comprising:
an OmpF promoter;
an OmpF gene encoding an OmpF protein;
a cleavage-site gene encoding an RNA or protein cleavage site; and
a gene of interest encoding a protein of interest,
wherein the expression vector encodes a fusion protein comprising the OmpF protein, the cleavage site and the protein of interest, and wherein the cleavage-site gene is located between the OmpF gene and the gene of interest in the expression vector such that the RNA or protein cleavage site is located between the OmpF protein and the protein of interest in the fusion protein.
2. **(Original)** The expression vector of Claim 1, further comprising a selectable marker.
3. **(Original)** The expression vector of Claim 1, wherein said selectable marker is ampicillin resistance.
4. **(Previously Presented)** The expression vector of Claim 1, wherein said cleavage site is configured to be cleaved by an RNase or a protease.
5. **(Previously Presented)** The expression vector of Claim 4, wherein said protease is selected from the group consisting of: Factor Xa, enterokinase, IgA protease, intein, genenase, thrombin, trypsin, pepsin, subtilisin, and plasmin.
6. **(Previously Presented)** The expression vector of Claim 1, wherein said protein of interest is selected from the group consisting of: a polypeptide, a protein, an enzyme, or an antibody.
7. **(Currently Amended)** The expression vector of Claim 6, wherein said protein of interest is an amino acid sequence comprising ~~the sequence for β -endorphin~~SEQ ID NO:17.

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8. (Previously Presented) The expression vector of Claim 1, wherein said expression vector is pOmpF6 contained in the deposition made under accession number KCTC 1026BP.

9. (Previously Presented) The expression vector of Claim 1, wherein said OmpF gene comprises the signal sequence.

10. (Previously Presented) A microorganism transformed with the expression vector of Claim 1.

11. (Previously Presented) The microorganism of Claim 10, wherein said microorganism is *Escherichia sp.*

12. (Previously Presented) The microorganism of Claim 10, wherein said microorganism is *Salmonella sp.*

13. (Previously Presented) The microorganism of Claim 10, wherein said microorganism lacks the OmpF gene other than the OmpF gene comprised within the expression vector.

14. (Currently Amended) The microorganism of Claim 10, wherein said microorganism ~~comprises~~ is *E. coli* BL101/pOmpF6 deposited under accession number KCTC 1026BP.

15. (Currently Amended) A method for the production of a protein of interest, comprising:

providing a microorganism transformed with the expression vector of Claim 1;

culturing the microorganism in a culture medium, thereby producing the fusion protein in the medium; and

separating the fusion protein from the medium.

16. (Previously Presented) The method of Claim 15, wherein the microorganism does not express OmpF protein in the absence of the expression vector.

17. (Previously Presented) The method of Claim 15, wherein the microorganism is *Escherichia sp.* or *Salmonella sp.*

18. (Original) The method of Claim 17, wherein the *Escherichia sp.* is *E. coli*.

19. (Previously Presented) The method of Claim 15, wherein the microorganism is *E. coli* BL101/pOmpF6 deposited under accession number KCTC 1026BP.

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~~21~~
~~20.~~ (Previously Presented) The method of Claim ~~25~~²⁰, wherein the enzyme is an RNase or a protease.

~~22~~
~~21.~~ (Previously Presented) The method of Claim ~~20~~²¹, wherein the protease is selected from the group consisting of: Factor Xa, enterokinase, genenase, IgA protease, intein, thrombin, trypsin, pepsin, subtilisin, and plasmin.

~~23~~
~~22.~~ (Previously Presented) The method of Claim 15, further comprising removing the microorganism from the medium after producing the fusion protein in the medium.

~~24~~
~~23.~~ (Currently Amended) The method of Claim 15, wherein said separating of the OmpF—fusion protein from the ~~mediamedium~~ comprises using anion-exchange chromatography.

~~26~~
~~24.~~ (Previously Presented) The method of Claim ~~26~~²⁵, wherein said collecting of the protein of interest comprises using reverse-phase HPLC.

~~20~~
~~25.~~ (Previously Presented) The method of Claim 15, further comprising cleaving the fusion protein at the cleavage site using an enzyme configured to selectively cleave the cleavage site after separating the fusion protein from the medium.

~~25~~
~~26.~~ (Previously Presented) The method of Claim ~~28~~²⁰, further comprising collecting the protein of interest cleaved from the fusion protein after cleaving the fusion protein.

27. (Canceled)

28. (Canceled)

29. (Canceled)

30. (Canceled)

31. (Canceled)